

CLAIMS

1. A radially self-expanding stent for implantation in a body passage comprises first and second sets of mutually  
5 counter-rotating metallic filaments which are braided together and define a tubular stent body having two ends which is mechanically biased towards a first radially expanded configuration in which it is unconstrained by externally applied forces and can be retained in a second  
10 radially compressed configuration, and in which some or all of the filament ends at the ends of the body are fixed together in pairs each consisting of counter-rotating filaments by placing the filaments over one another and placing them adjacent to and substantially parallel to one  
15 another and further comprising a join at each end fixing to retain the ends of the filaments in contact with one another.
2. A stent according to claim 1, wherein the fixed ends  
20 are shaped or heat treated to urge the respective filaments to a position in which they are biased out of alignment with the adjacent filament to which they are connected and cross over one another.
- 25 3. A stent according to claim 1 or claim 2, wherein the welding softens the metal such that it forms a globule before resolidifying to form a bead.
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- 30 4. A stent according to any preceding claim, wherein each filament end is welded to one of its next-but-one neighbours.
5. A stent according to claim 1, 2, 3 or 4, wherein some but not all of the filament ends are welded.

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6. A stent according to claim 5, wherein the join generally has a diameter of at least 1.2 times that of the diameter of the filament.

5 7. A stent according to claim 5 or 6, wherein the diameter of the join is no more than 3, preferably less than 2.5, times the diameter of the filament.

10 8. A stent according to any of claim 5 to 7, wherein at least some of the joins provide a shoulder in a rearward axial direction.

15 9. A stent according to any preceding claim, wherein, in its fully unloaded conformation the angle  $\alpha$  between filaments is less than  $90^\circ$ .

20 10. A stent according to any preceding claim, wherein the angle at which the filaments are joined to one another is in the range  $0^\circ$  to  $15^\circ$ .

11. A stent according to any preceding claim, wherein the filaments bend outwardly towards the join, the angle at which they bend increasing as the filaments extend towards the join.

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